



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/718,224	11/21/2000	Darryl Black	10.0795	2978

22474 7590 11/04/2005

DOUGHERTY, CLEMENTS, HOFER, BERNARD & WALKER  
1901 ROXBOROUGH ROAD  
SUITE 300  
CHARLOTTE, NC 28211

EXAMINER
----------

STRANGE, AARON N

ART UNIT	PAPER NUMBER
----------	--------------

2153

DATE MAILED: 11/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/718,224	<b>Applicant(s)</b> BLACK ET AL.	
	<b>Examiner</b> Aaron Strange	<b>Art Unit</b> 2153	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 September 2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9, 11-28 and 32-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-28 is/are rejected.
- 7) ☒ Claim(s) 32-34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 8/8/05 with respect to claims 1-9 and 11-28 have been fully considered but they are not persuasive.
2. With regard to claim 1, and Applicant's assertion that Cisco "does not teach or suggest the use of an active query to send a notification from a configuration database storing threshold expressions within a network device to applications executing on that device upon occurrence of changes in those threshold expressions" (Page 8, Line 25 to Page 9, Line 2 of remarks), the Examiner respectfully disagrees. Cisco clearly discloses that changes in a policy may be "enforced" by a user, which will result in them being downloaded to the agent operating on the network device at least Page 2-5, lines 20-27 of second column and Page 2-16).
3. With regard to claim 13, and Applicant's assertion that Cisco does not teach features of claim 13, it is noted that the Cisco reference was not cited in the rejection of claim 13, which was rejected based on Ordanic et al. (US 5,751,964) in the Office action of 4/8/2004 and maintained in the Office action of 3/10/05.
4. With regard to claim 14, and Applicant's assertion that "Cisco does not teach assigning a unique identifier to a plurality of resources in a network device" (Page 11, Lines 3-4 of Remarks), the Examiner respectfully disagrees. Applicant appears to base

Art Unit: 2153

this assertion on an alleged difference between the policy name disclosed by Cisco and an identifier assigned to a resource of a network device. However, the policy name was not cited in the rejection of claim 14, which referred to the MIB variable name as representing a unique identifier to each of a plurality of resources in a network device, and did not refer to the policy name.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3,5,7,8,11,12,14-19,21-25 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Cisco Systems Inc. ("Using Threshold Manager").

7. With regard to claim 1, Cisco Systems Inc., hereafter referred to as Cisco, discloses a method of managing a telecommunications network, comprising: executing at least one application (agent) on a network device (at least Page 2-16, Lines 13-21); receiving a threshold expression from a user through a user interface (Page, 2-18, Fig 2-5); and implementing the threshold expression within the network device (enforce to the agent) while the network device is operational (Page 2-17, Lines 7-14), wherein said implementing step comprises storing the threshold expression in a configuration

Art Unit: 2153

database (policies may be locally saved in the threshold manager database) (at least Page 2-5, Lines 10-19 of second column and Page 2-17), and establishing at least one active query between the configuration database and said application so as to send a notification from the database to the application upon occurrence of a change in said threshold expression (enforcing a policy downloads it to the agent) (at least Page 2-5, lines 20-27 of second column and Page 2-16).

8. With regard to claim 2, Cisco further discloses that receiving a threshold expression comprises receiving a user selection of an existing threshold expression (predefined policies) (Page 2-17, Lines 1-3).

9. With regard to claim 3, Cisco further discloses that receiving a threshold expression comprises receiving a new threshold expression from the user (Page 2-17, Lines 5-14).

10. With regard to claim 5, Cisco further discloses: receiving a resource selection from the user through the user interface (select the policy to configure)(Fig 2-4); and displaying a threshold dialog box (create threshold policy box) (Fig 2-5), wherein the threshold expression is received through the threshold dialog box (Page 2-17, Lines 4-14).

11. With regard to claim 7, Cisco further discloses displaying a default threshold expression to the user through the threshold dialog box (Page 2-19, Lines 10-11 and 19-20).

12. With regard to claim 8, Cisco discloses a method of managing a telecommunications network, comprising: displaying a threshold dialog box to the user (create threshold policy box) (Fig 2-5), receiving a threshold expression from the user through the threshold dialog box (Page, 2-18, Fig 2-5), implementing the threshold expression within a network device (enforce to the agent) while the network device is operational (Page 2-17, Lines 7-14), wherein implementing the threshold expression within a network device while the network device is operational comprises: establishing an active query between a configuration database within the network device and at least one application capable of executing a thresholding code (enforcing a policy downloads it to the agent)(at least Page 2-15, Lines 20-27 of second column and Page 2-16), updating thresholding code executing within the network device with the data written into at least one table (enforce the policy) (Page 2-16, Lines 19-21) in response to an active query notification from said configuration database to said application. Cisco does not specifically disclose writing data from the threshold dialog box into at least one table in a configuration database within the network device. However, since the network device must keep track of the threshold policies that pertain to it, the data from the threshold must be written to a configuration database of some sort, and is therefore inherent in the system disclosed by Cisco.

13. With regard to claim 11, Cisco discloses a method of managing a telecommunications network, comprising: executing at least one application (agent) on a network device (at least Page 2-16, Lines 13-21); receiving a new threshold expression from a user through a user interface (Page 2-17, Lines 5-14); and implementing the new threshold expression within a network device while the network device is operational (Page 2-17, Lines 7-14), wherein said implementing step comprises: updating a configuration database with the new threshold expression (policies may be locally saved in the threshold manager database) (at least Page 2-5, Lines 10-19 of second column and Page 2-17) , and establishing at least one active query between said configuration database and said application so as to send a notification from the database to the application when the new threshold expression is received (enforcing a policy downloads it to the agent)(at least Page 2-15, Lines 20-27 of second column and Page 2-16).

14. With regard to claim 12, Cisco discloses a method of managing a telecommunications network, comprising: displaying a plurality of existing threshold expressions through a user interface (Fig 2-4); receiving a user selection of one of the existing threshold expressions; and implementing the selected existing threshold expression within a network device while the network device is operational (Page 2-16, Lines 1-5) wherein said implementing step comprises: updating a configuration database with the new threshold expression (policies may be locally saved in the

Art Unit: 2153

threshold manager database) (at least Page 2-5, Lines 10-19 of second column and Page 2-17) , and establishing at least one active query between said configuration database and said application so as to send a notification from the database to the application when the new threshold expression is received (enforcing a policy downloads it to the agent)(at least Page 2-15, Lines 20-27 of second column and Page 2-16).

15. With regard to claim 14, Cisco discloses a method of managing a telecommunications network, comprising: assigning a unique identifier to each of a plurality of resources in a network device (MIB variable name); receiving a resource selection from a user through a user interface (enter variable name in dialog box); and establishing a threshold evaluation for the selected resource using the unique identifier assigned to the selected resource (Page 2-18, Lines 5-7, and Fig 2-5).

16. With regard to claim 15, Cisco further discloses receiving a resource selection and a resource attribute selection from the user through a threshold dialog box (Create Threshold Policy box) (Fig 2-5).

17. With regard to claim 16, Cisco further discloses that the threshold evaluation is established within the network device and while the network device is operational (Page 2-16, Lines 1-5).



18. With regard to claim 17, Cisco further discloses receiving a threshold expression from the user through the threshold dialog box (Page, 2-18, Fig 2-5); writing data, including the unique identifier assigned to the selected resource and the threshold expression, from the threshold dialog box into at least one table in a configuration database within the network device; and updating thresholding code executing within the network device (agent) with the data written into the at least one table (enforce the policy)(Page 2-16, Lines 19-21). Cisco does not specifically disclose writing data, including the unique identifier assigned to the selected resource and the threshold expression, from the threshold dialog box into at least one table in a configuration database within the network device. However, since the network device must keep track of the threshold policies that pertain to it as well as the unique identifier (variable) to be monitored, the data from the threshold must be written to a configuration database of some sort, and is therefore inherent in the system disclosed by Cisco.

19. With regard to claim 18, Cisco further discloses that receiving a threshold expression from the user through the threshold dialog box comprises: receiving a user selection of an existing threshold expression (default threshold value) (Page 2-19, Lines 10-11).

20. With regard to claim 19, Cisco further discloses that receiving a threshold expression from the user through the threshold dialog box comprises: receiving a new threshold expression from the user (Page 2-17, Lines 5-14).

21. With regard to claim 21, Cisco further discloses sending an active query notice to each application including the thresholding code and corresponding to the selected resource (enforcing a policy downloads it to the agent) (at least Page 2-5, lines 20-27 of second column and Page 2-16).

22. With regard to claim 22, Cisco discloses a method of managing a telecommunications network, comprising: establishing an active query between at least one record of a configuration database within a network device and an application executing a thresholding code in said device, said record storing at least one threshold expression (policies may be locally saved in the threshold manager database) (at least Page 2-5, Lines 10-19 of second column and Page 2-17), modifying said threshold expression while the network device is operational (Page 2-28); sending an active query notification from the configuration database to the application indicative of said modification, wherein said application updates the thresholding code in accordance with said modification (enforcing a policy downloads it to the agent)(at least Page 2-15, Lines 20-27 of second column and Page 2-16), detecting a threshold event in an application within a network device (threshold crossing) in accordance with said modified threshold expressions, and responding to the threshold event in accordance with an action defined within the thresholding code (generate event) (Page 2-2, Lines 4-5). Cisco does not specifically recite notifying the modified thresholding code of the threshold event.

However, this step is inherent since the thresholding code must be notified of the modified threshold event in order to properly respond to it.

23. With regard to claim 23, Cisco further discloses that detecting a threshold event in an application within a network device comprises: monitoring a resource attribute continuously (user specified interval); and comparing the resource attribute against a threshold expression (rising/falling thresholds) provided to the application by the thresholding code (Page 2-12, Lines 10-11).

24. With regard to claim 24, Cisco further discloses that responding to the threshold event in accordance with an action defined within the thresholding code comprises: notifying a network manager of the threshold event (send SNMP trap to a management station) (Page 2-13, Lines 15-22).

25. With regard to claim 25, Cisco further discloses that notifying a network manager of the threshold event comprises: sending a notice to network management system software external to the network (Page 2-13, Lines 15-22).

26. With regard to claim 28, Cisco further discloses that responding to the threshold event in accordance with an action defined within the thresholding code comprises: logging the threshold event (Page 2-13, Lines 15-22).

***Claim Rejections - 35 USC § 103***

27. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

28. Claims 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cisco Systems, Inc. in view of Ordanic et al. (US 5,751,964).

29. With regard to claims 4 and 13, while the system disclosed by Cisco shows substantial features of the claimed invention (discussed above), it fails to disclose that the threshold expression includes a plurality of cascaded threshold expressions.

Ordanic et al. disclose a system for determining thresholds in network management, and teach the use of cascaded threshold expressions as a means for establishing the severity of a threshold event (Col 6, Lines 14-26). For example, a network manager could set a threshold level for delay on a link representing a moderate delay, and an additional threshold representing a severe delay to be checked only when the first threshold is exceeded. The manager could choose to have the system log whenever the first threshold is exceeded, but may choose to be immediately notified when a severe delay occurs. This is advantageous because it allows the network manager to monitor when less severe events occur, while only being notified of severe events occur.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to support cascaded threshold expressions as a means for the network manager to establish the severity of a threshold event. This would allow different actions to be performed depending on the severity of the threshold event.

30. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cisco Systems, Inc.

31. With regard to claim 6, while the system disclosed by Cisco shows substantial features of the claimed invention (discussed above), it fails to disclose displaying a plurality of existing threshold expressions to the user through the threshold dialog box.

Cisco discloses displaying a plurality of predetermined threshold policies (Page 2-17, Lines 1-3) as well as providing a default threshold value (Page 2-19, Lines 10-11), but does not provide a plurality of threshold expressions within the threshold dialog box. However, it would be advantageous to provide a plurality of expressions from within the threshold dialog box since it would allow the user access to a plurality of commonly used default settings. This would allow the user to choose from predefined threshold levels such as warning, critical, or severe without having to manually specify the threshold level.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to display a plurality of existing threshold expressions to the user through the threshold dialog box as a means to choose from predetermined

setting such as warning, critical, and severe threshold levels without requiring a threshold to be manually entered. This simplifies the setup of the system for users since manual values do not need to be known by the user.

32. Claims 9 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cisco Systems, Inc. in view of Microsoft Corporation.

33. With regard to claims 9 and 20, while the system disclosed by Cisco shows substantial features of the claimed invention (discussed above), it fails to specifically disclose that writing data from the threshold dialog box into at least one table in a configuration database within the network device comprises: sending the data from the threshold dialog box through a network management system (NMS) client to an NMS server; and writing the data into the at least one table through the NMS server.

Cisco discloses enforcing a policy on a device in order to activate a threshold expression, but remains silent on the specific means of enforcing the policy. Cisco also discloses storing saved policies for later usage (Page 2-22, Line 9 to Page 2-23, Line 6), but fails to disclose where the policies are saved.

Microsoft discloses that SNMP agents can be configured to accept SNMP packets only from specific hosts, increasing security of the devices (Page 1, Lines 22-26). Therefore, it would have been advantageous to send the data to the device and write into the configuration table by sending it to an NMS server first. By communicating through the NMS server, the network administrator can allow settings of network

Art Unit: 2153

devices to be changed without allowing direct access to the devices. This can help prevent malicious users from damaging the network since security measures can be implemented on the server to help prevent attacks on the network, and the devices can be set up so they will only respond to threshold policies sent by the NMS server.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to write data from the threshold dialog box into at least one table in a configuration database within the network device by sending the data from the threshold dialog box through a network management system (NMS) client to an NMS server; and writing the data into the at least one table through the NMS server. This would allow the devices to be configured so they respond only to requests from the NMS server, increasing security of the network since additional security measures could be implemented on the NMS server to help deter malicious users.

34. Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cisco Systems Inc. in view of Fowler et al. (US 6,714,977).

35. With regard to claims 26 and 27, while the system disclosed by Cisco shows substantial features of the claimed invention (discussed above), it fails to disclose that notifying a network manager of the threshold event comprises: sending an electronic mail message or a page to the network manager.

Fowler et al. disclose a method for monitoring a computer network and sending a

Art Unit: 2153

message to the network manager via email or pager when an out-of-limit condition occurs (Col 4, Lines 32-36 and Col 17, Lines 16-28). This is advantageous because the network manager does not need to be physically located at a network management station in order to be notified that a threshold has been exceeded. The network manager can be immediately notified via email at any computer with email access or via a pager at any location where the pager can receive a signal. This allows the network manager to immediately respond to serious problems in the network, rather than having to wait until returning to the network management station that receives the message to learn of the problem.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to notify the network manager of a threshold event by sending an electronic mail message and/or a page to the network manager. This allows the network manager to be notified of problems in the network without being physically located at a network management station to receive the notification.

***Allowable Subject Matter***

36. Claims 32-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



***Conclusion***


37. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

38. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Strange whose telephone number is 571-272-3959. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS  
10/30/2005

  
GLENTON B. BURGESS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100